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REMARKS

Claims 1-19 are pending in the present application.

Claim 19 has been withdrawn from consideration following Applicants' election in response to a restriction requirement. Therefore, claims 1-18 are currently under examination.

Claims 1, 6, and 11 to 13 have been amended to indicate that radiation emitted from a sample is detected independent of anisotropic radiation emission. The amendments are supported throughout the specification, for example, at page 11, lines 15-29, which indicates that measurements made in the recited geometries are measurements that are independent of anisotropic radiation emission. The amendment to claims 11 and 12 are further supported, for example, on page 17, line 30, to page 18, line 22, which indicates that detection of emitted radiation independent of anisotropic radiation emission can be achieved when the direction of polarization of the irradiation beam is 35.3 degrees from a line parallel to the trajectory of a sample stream.

As set forth above, the amendments are supported by the specification and do not add new matter. The claim amendments do not raise new issues for consideration or require a further search. Further, the amendments place the claims in better condition for allowance or for appeal. Accordingly, Applicant respectfully requests that the Examiner enter the amendments.

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Rejections Under 35 U.S.C. §103

Claims 1, 5, 6, 10, 11, 12, 13 and 18 stand rejected under 35 U.S.C. §103(a) as obvious over Howie et al. (U.S. Patent No. 5,129,723). The Office Action alleges that because Howie et al. describes that signal detectors can be placed at any orientation with respect to a polarized radiation source and flow chamber, it would have been obvious to one skilled in the art to select the optimum value of the position of the detectors for analysis of a desired scattered radiation, including about 54.7 degrees from the direction of polarization and 35.5 degrees from a line parallel to a sample stream trajectory.

Applicants submit that Howie et al. does not teach or suggest the claimed invention. Specifically, whereas the claimed invention relates to apparatus and methods involving specific geometries that allow selective detection of radiation independent of anisotropic radiation emission, Howie et al. describes detecting light scattering at an angle relative to the axis of a laser beam (column 6, lines 43-50, Figure 3). Howie et al. does not suggest any polarization direction or detection of radiation emitted at anisotropic-independent angles with respect to the direction of polarization. Instead, Howie et al. is concerned with the measurement of scatter and the application of Snell's Law (column 6, lines 29-50). The reference, in describing the use of arrayed detectors in a horizontal plane or a single detector rotated in a horizontal plane about the sample for measuring light scatter (column 5, lines 60-65, Figure 2) provides no suggestion that measurements can be made independent of any anisotropic effect, nor any suggestion of specific geometries recited in the claims at which selective detection of radiation independent of anisotropic radiation emission can be made.

Further, Applicants submit that Howie et al. provides no motivation for producing the claimed invention. In this regard, the methods described in Howie et

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al. suggest no need for detection of radiation independent of anisotropic radiation emission, but rather indicate a need for detecting light scatter as a function of scattering angle for determining molecular weight of a molecule or indicate a need for using a detector that rotates in a plane about the sample (column 5, lines 60-67). Based on Howie et al., one skilled in the art would have had no motivation to detect radiation at an anisotropic-independent specific angle of about 54.7 degrees from the direction of polarization or of about 35.3 degrees from a line parallel to a sample stream trajectory.

Specifically regarding claim 13, Howie et al. does not suggest a method for detecting fluorescent intensity for a sample in a flow cytometer independent of anisotropic radiation emission. Rather, the reference describes measuring scattered light and is silent with respect to placement of fluorescence detectors at anisotropic-independent angles of about 54.7 degrees from the direction of polarization or placement of the polarization direction at 35.3 degrees from a line parallel to the trajectory of a sample stream. For these reasons, Howie et al. cannot render obvious the invention of claim 13.

In view of the above, Applicants submit that Howie et al. does not suggest or provide a motivation for producing the invention of claims 1, 5, 6, 10, 11, 12, 13 and 18. Therefore, Applicants respectively request that this ground of rejection be withdrawn.

Claims 2-4, 7-9 and 14-17 stand rejected under 35 U.S.C. §103(a) as allegedly obvious over Howie et al. in view of Batchelder et al. (U.S. Patent No. 5,037,202). The rejected claims are dependent claims directed to more specific embodiments where the trajectory of a sample stream is orthogonal to the irradiation source or to a signal detector or where the trajectory is parallel to the direction of polarization. The Office Action alleges that it would have been obvious

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to modify the device of Howie et al. with the device of Batchelder et al. in order to achieve optimum detection conditions by selecting the polarization state relative to the direction of sample flow and arrange the detectors accordingly.

Batchelder et al. does not cure the deficiencies of the primary references in describing the claimed invention. Batchelder et al. is directed to an optical system for transmitting a focal plane that is useful for classifying particles. The reference does not teach or suggest anisotropic effects or that measurements independent of this phenomenon would reduce variance in sample measurement. The specific orientations of the radiation source, detection means and direction of polarization allegedly described by Batchelder et al. are therefore irrelevant absent some suggestion of an angle for selectively detecting emitted radiation that is independent of any anisotropic effect because neither the primary reference to Howie et al. nor the secondary reference to Batchelder et al. suggest or provide any motivation to do so. Absent any suggestion, the cited references cannot render the claimed invention obvious. Accordingly, Applicants respectfully request that this ground of rejection be withdrawn.

Applicants respectfully point out an inaccuracy in the Office Action. Specifically, whereas the Office Action states that Applicants argued that the cited references "fail to teach the specific limitation.." (Page 4, second paragraph), Applicants submit that their argument instead related to failure of the cited references in suggesting the claimed invention, as is appropriate in response to an obviousness rejection.

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CONCLUSION

In light of the amendments and remarks herein, Applicants submit that the claims are now in condition for allowance and respectfully request a notice to this effect. Should the Examiner have any questions, he is invited to call the undersigned attorney.

Respectfully Submitted,

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